



IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Indicate the Application of:

Cantrell et al.

Application No.: 10/530,446

Filed: April 5, 2005

Atty. File No.: 1585 WO/US

**Title: Process For The Preparation of  
Quaternary N-alkyl Morphinan  
Alkaloid Salts**

) Group Art Unit: 1625

Examiner: Not yet assigned

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I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING MAILED USING THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL TO THE U.S. PATENT & TRADEMARK OFFICE ON JUNE 28, 2006.

Michelle D. DeCorte  
MICHELLE D. DE CORTE

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Alexandria, VA 22313-1450

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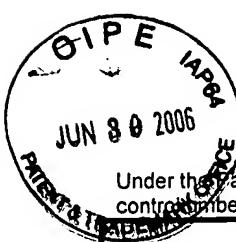
In accordance with duties imposed by 37 CFR §1.56 and means for complying therewith according to 37 CFR §§1.97-1.98, the references listed on the attached Form PTO/SB/08A are called to the attention of the US Patent & Trademark Office in relation to the present application.

No representation is made that the cited references are the only art or that the cited references represents the best art. The Examiner is urged to consider all of the cited references and to make an independent evaluation of the teachings and materiality of each.

Since this correspondence is being submitted prior to a first Office Action on the merits, it is believed that no fee is due. However, if a fee is required for entry of this correspondence, please charge Deposit Account No. 13-1160.

Respectfully submitted,

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## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 2 Attorney Docket Number 1585 WO/US

## FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>	
			Application Number	10/530,446
			Filing Date	April 5, 2005
			First Named Inventor	Gary L. CANTRELL
			Art Unit	1625
Examiner Name	Not yet assigned			
Sheet 2	of 2	Attorney Docket Number	1585 WO/US	

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of The item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	27	MUSICH et al., Reaction of O-methyl-N, N'-Diisopropylisourea with Amino Acids and Amines, Journal of Organic Chemistry (1977), 42(1), pp. 139-141		
	28	GIGER et al., Synthesis and Reactions of the diels-Alder Adduct of Thebaine with 4-phenyl-1,2,4-triazoline-3,5-dione, Tetrahedron (1973), 29(16), pp. 2387-2391		
	29	KOCZKA et al., Selective Quaternization of Compounds with Morphine Skeleton, Acta. Chim. Acad. Sci. Hung. (1967), 51(4), pp. 393-402		
	30	SEKI, Isao, Studies on the Morphine Alkaloids and its Related Compounds. XIV. Preparation of 6-Amino-hydrophenanthrene Compounds from Hofmann Degradation Products of the Morphine Alkaloids, Chemical & Pharmaceutical Bulletin (1966), 14(5), pp. 453-461		
	31	FRY et al., Mannich Derivatives of Analgesic Agents, Journal of Organic Chemistry (1959), 24, pp. 116-117		
	32	BENTLEY et al., The Reduction of Thebaine and Dihydrothebaine by Sodium and Ammonia, Journal of the Chemical Society, Abstracts (1952), pp. 958-966		
	33	SCHULTZ et al., Thebaine Cyclopropanation, Russian Journal of Organic chemistry (Translation of Zhurnal Organicheskoi Khimii) (2003), 39(8), pp. 1083-1088		
	34	OTTO et al., Selection and Amplification of Hosts from Dynamic combinatorial Libraries of Macrocyclic Disulfides, Science (Washington, DC, United States) (2002), 297(5581), pp. 590-593 & Supporting Online Material		
	35	LOPEZ et al., Photoxidation of Thebaine. A Route to 14-Hydroxymorphinones and Hydrodibenzofuran Analogs of Methadone, Tetrahedron Letters (1994), 35(31), pp. 5727-5730		
	36	MANOHARAN et al., Stereoselectivity in Quaternization of Thebaine: 270 MHz PMR Spectroscopic Studies, Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal chemistry (1987), 26B(2), pp. 140-142		
	37	SHULTS et al., Tranformations of Quaternary Tetrahydrothebaine Sulfones, Zh. Org. Khim. (1993), 29(6), pp. 1149-1162, (English pages 953-963)		
	38	FUNKE et al., A <sup>1</sup> H and <sup>13</sup> C Nuclear Magnetic Resonance Study of Three Quaternary Salts of Naloxone and Oxymorphone, J. Chem. Soc. Perkin Trans. (1986) 2, pp. 735-738		
	39	LOPEZ et al., The [4+2] Addition of Singlet Oxygen to Thebaine: New Access to Highly Functionalized Morphine Derivatives via Opioid Endoperoxides, J. Org. Chem. (2000), 65(15), pp. 4671-4678		

Examiner Signature	Date Considered
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